Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.   (Currently Amended) Dental radiology apparatus, characterized in that it comprises:

- an intraoral sensor comprising a detector that includes an active pixel array produced using biCMOS technology [[and]], the active pixel array converting received x-rays into at least one analog electrical output signal,

- an electronic module encapsulated in a case and which has at least one detector activation device connected to the case, the module being distinct from and linked to the sensor by a wire link for the transmission to said sensor of a detector activation signal generated in the module and for the transmission to the module of said at least one analog electrical output signal, the module having an analog-digital conversion means of converter for converting said at least one analog electrical output signal into at least one digital output signal,

- a remote processing and display unit of said at least one digital output signal which is linked to the electronic module by a wire link intended to ensure the transmission to the unit of said at least one digital output signal.

2.-20. (Canceled)

21. (Withdrawn) Dental radiology apparatus, characterized in that it comprises an intraoral sensor intended to receive x-rays that have passed through at least one tooth, said sensor including:

- an x-ray to visible radiation converter,

- a detector comprising an active pixel array produced using biCMOS technology on a substrate made of semi-conductor material,

- a sequencer capable of generating several control signals to control the active pixel array, said sequencer being integrated on the same substrate as the array.

22.-25. (Canceled)

26. (Withdrawn) Signal processing method in a dental radiology apparatus comprising an intraoral sensor that includes an active pixel array produced using biCMOS technology, characterized in that the method has the following steps:

- sampling of the data values held by the pixels of the array having been exposed to a radiation,

- generation of at least one sensor analog output signal based on the data values sampled on the pixels,

- conversion of said at least one analog output signal into one digital output signal,

- application of a correction to the analog output signal or to one of the analog output signals, to compensate in the digital output signal for any drifts due to the variations of the dark current in the array.

27.-41. (Canceled)

42. (Withdrawn) Dental radiology apparatus, characterized in that it comprises an intraoral sensor including:

- a detector comprising an active pixel array produced using biCMOS technology and converting x-rays received by the array into at least one analog output signal,

the apparatus comprising:

- an analog-digital converter for converting said at least one analog output signal into one digital output signal,

- a signal corrector that is suited to applying a correction to the analog output signal or to one of the analog output signals, to compensate in the digital output signal for any drifts due to the variations of the dark current in the array.

43.-59. (Canceled)

60. (Withdrawn) Dental radiology apparatus, characterized in that it comprises an intraoral sensor intended to receive x-rays that have passed through at least one tooth, said sensor including:

- an x-ray to visible radiation converter,

- a detector comprising an active pixel array produced using biCMOS technology and converting the visible radiation thus converted into at least one analog electrical signal,

- a generator of a sampling signal synchronized with said at least one analog electrical signal and which is intended for the later conversion of said at least one analog electrical signal into a digital signal.

61.-66. (Canceled)

67. (Withdrawn) Signal processing method in a dental radiology apparatus comprising an intraoral sensor intended to receive x-rays that have passed through at least one tooth, characterized in that it includes the following steps performed in the sensor:

- reception of x-rays having passed through at least one tooth,

- conversion of the received x-rays into visible radiation,

- transformation of the visible radiation thus converted into at least one analog electrical signal by an active pixel array produced using biCMOS technology,

- generation of a sampling signal synchronized with said at least one analog electrical signal and which is intended for the later conversion of said at least one analog electrical signal into a digital signal.

68.-73. (Canceled)

74. (Withdrawn) Method of signal processing in a dental radiology apparatus comprising an intraoral sensor that includes a detector including an

active pixel array produced using biCMOS technology, the pixels being arranged in rows and columns, characterized in that it comprises the following steps:

- selection of each row of the array,

- for each row selected, sampling of the data values held by each pixel having been exposed to radiation,

- generation of a read signal from the sampled data values for the array's pixels,

- application at the detector's input of an input reference signal (black-in),

- production of an output signal based on the array's read signal and an output reference signal (black-ref) representative of the detector's intrinsic electronic drifts and which is obtained at the detector output based on the input reference signal applied at said detector's input.

75.-86. (Canceled)

87. (Withdrawn) Dental radiology apparatus comprising an intraoral sensor that includes a detector including an active pixel array produced using biCMOS technology, the pixels being arranged in rows and columns, characterized in that it comprises:

- means for selecting each row of the array,

- means for sampling the data values held by each pixel having been exposed to radiation, for each row selected,

- means for generating a read signal from the sampled data values for the array's pixels,

- means for applying at the detector's input an input reference signal,

- means for producing an output signal from the array's read signal and an output reference signal (black-ref) representative of the detector's intrinsic electronic drifts and which is obtained at the detector output based on the input reference signal applied at said detector's input.

88.-100. (Canceled)

101. (Withdrawn) Method of signal processing in a dental radiology apparatus comprising an intraoral sensor that includes an active pixel array produced using biCMOS technology, the pixels being arranged in rows and columns, the sensor delivering an analog output signal produced from the data values held by the array's pixels exposed to radiation, characterized in that, the pixels of at least one array column being optically inactive, the method includes the following steps:

- conversion of the analog output signal into a digital output signal,
- reading in the digital output signal of one or more data values coming from each optically inactive pixel of an array row,
- reading in the digital output signal of one or more data values coming from each optically inactive pixel of at least one adjacent row, the relevant pixel(s) of each of the two rows being equal in number and arranged in the same column(s),
- comparison of the data value(s) read respectively for the inactive pixel(s) of a row with the data value(s) read respectively for the inactive pixel(s) of said at least one adjacent row,
- according to the result of the comparison, decision-making as to any modification in the output signal of the data values of all the pixels of one of the rows used for the comparison.

102.-110. (Canceled)

111. (Withdrawn) Dental radiology apparatus comprising an intraoral sensor that includes an active pixel array produced using biCMOS technology, the pixels being arranged in rows and columns, the sensor delivering an analog output signal produced from the data values held by the array's pixels exposed to radiation, characterized in that, the pixels of at least one array column being optically inactive, the apparatus includes:

- means for converting the analog output signal into a digital output signal,

- means for reading, in the digital output signal, one or more data values coming from each optically inactive pixel of an array row,

- means for reading, in the digital output signal, one or more data values coming from each optically inactive pixel of at least one adjacent row, the relevant pixel(s) of each of the two rows being equal in number and arranged in the same column(s),

- a comparator supplying a comparison of the data value(s) read respectively for the inactive pixel(s) of a row with the data value(s) read respectively for the inactive pixel(s) of said at least one adjacent row,

- decision-making means capable of providing a decision as to any modification in the output signal of the data values of all the pixels of one of the rows used for the comparison.

112.-118. (Canceled)

119. (New) The apparatus according to claim 1, characterized in that the encapsulated electronic module has weight and dimensions suited to enable, when the apparatus is used, the sensor to be held in a patient's mouth when said encapsulated electronic module is suspended from said sensor.

120. (New) The apparatus according to claim 1, characterized in that each wire link is a cable.

121. (New) The apparatus according to claim 120, characterized in that each cable is inserted at one of its ends into the case, the electronic module fitted with anti-pull devices each capable of working together with one end of one of the cable to prevent removal of the corresponding cable from the case by pulling action exerted on said cable.

122. (New) The apparatus according to claim 121, characterized in that each cable comprises a coaxial sheath with a bundle of electrical wires, opposite the end of each cable that inserts into the case, part of the wire bundle being solid with a metal anti-pull body of the corresponding anti-pull device.

123. (New) The apparatus according to claim 122, characterized in that the electronic module comprises a printed circuit board with an overall elongated shape along a longitudinal axis and having, at each of the two opposite longitudinal ends, an axial cut-out open to an outside of the circuit to house in the longitudinal direction the metal anti-pull body and part of the corresponding wire bundle made solid and aligned, the cut-out being made to prevent removal of the body in this longitudinal direction.

124. (New) The apparatus according to claim 123, characterized in that each metal anti-pull body comprises fitting elements arranged on opposite sides parallel to a direction of the part of the wire bundle made solid with the body and which work together with the complementary fitting elements respectively arranged on the opposite longitudinal edges of the corresponding cut-out.

125. (New) The apparatus according to claim 124, characterized in that each part of each of the wire bundles made solid with an anti-pull body is made solid with a cylindrical drum that surrounds the anti-pull body and is held solid with the corresponding body.

126. (New) The apparatus according to claim 123, further comprising two metal half shells, one arranged on either side of the printed circuit board and assembled together so as to shield the printed circuit board.

127. (New) The apparatus according to claim 1, characterized in that the case comprises at least two plastic parts forming a cover and which are assembled together to encapsulate the electronic module.

128. (New) The apparatus according to claim 127, characterized in that the case comprises a drip proof surface.